

Scientific Note

A REMARKABLE AND DISJUNCT RANGE EXTENSION FOR THE GENUS *YERMOIA* McDUNNOUGH (LEPIDOPTERA: GEOMETRIDAE)

During an ongoing biodiversity study of the insect fauna of the Hanford Nuclear Site located in southcentral Washington State (Grissell, E. E. & R. S. Zack. 1996. Proc. Entomol. Soc. 98: 827–828; O'Brien, C. W. & R. S. Zack. 1997. Pan-Pacif. Entomol. 73: 58–59; Zack, R. S. 1998. Northwest Sci. 72: 127–141; Zack et al. 1998. Pan-Pacif. Entomol. 74: 203–209), an unusual geometrid moth was collected. Examination of the major Pacific Northwest insect and Lepidoptera collections revealed no specimens of the species. However, Shepard found a series of the apparently same species at the Bohart Museum, Entomology Department, University of California, Davis. Genitalic examination of the Washington and California material and reference to the literature confirmed that the species was *Yermoia perplexata* McDunnough (McDunnough, J. H. 1940. Canad. Entomol. 72: 90–103).

The genus and the only included species were described by McDunnough. In 1961 Rindge (Rindge, F. H. Amer. Mus. Nov. 2065: 1–11) described a second species in the genus but in 1983 Rindge (Rindge, F. H. Bull. Amer. Mus. Nat. His. 175: 147–262) transferred the second species out of the genus. Thus the genus is monotypic. Information from Rindge (1961) and specimens in the Bohart Museum show that the previous known range of *Yermoia perplexata* was from Cochise and Santa Cruz Counties, Arizona and San Diego County, California north to Juab County, Utah and Mono County, California.

During 1996, extensive sand dunes that border the eastern edge of the Hanford Site along the Columbia River and inland were light trapped using a 150 watt mercury vapor lamp. A single site within the dunes (46°31.369' N 119°21.192' W) was sampled on a weekly to biweekly basis throughout the year. The verification of this geometrid for the Hanford Nuclear Site represents a 900 km northern extension of the range of the species. A total of twelve male specimens were taken on 19 and 28 Mar 1996 in rolling dunes along the only wild river habitat of the Columbia River in Washington State. Voucher specimens are placed in the M. T. James Entomological Collection, Washington State University and the private collection of J. H. Shepard.

At the southern end of its range, *Y. perplexata* flies in January. The March dates in Washington represent points similar to the seasonal development at the southern end the species' range. This early flight time is undoubtedly why the distribution of the species is poorly known. One should look for *Y. perplexata* in sand dune habitat in the Alvord Desert of southeastern Oregon and the Bruneau Dunes of southwestern Idaho and other dune environs throughout the interior Pacific Northwest. There are several species of Noctuidae and Cossidae with later flight periods that have been recorded from various sand dunes along the Columbia River and at either the Alvord Desert or the Bruneau Dunes locations.

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